



ESRN

UL924 ALCR Dimming Disable

Overview

The ESRN is a UL924-listed, 20 Amp SPST automatic load control relay designed for emergency lighting systems. It activates emergency lighting automatically when normal power fails. Additionally, it can bypass wall switches and lighting control panels. The device can also disable 0-10V dimming, ensuring lights are overridden to full brightness during an emergency.

Physical Specification

Dimensions:	4.00" H x 4.00" W x 1.81" D (102 mm x 102 mm x 46 mm)
Mounting:	Flat Mount or 1/2-14 NPT Threaded Stem *See OEM Spec Sheet for mounting screw pattern.
Temperature Rating:	-30 °F to 140 °F (-34 °C to 60 °C)
Humidity Range:	5% to 95% (noncondensing)
Relay:	One (1) SPST Continuous Duty Coil
Operate Time:	18 ms
Expected Relay Life:	10 Million Cycles
Approvals:	UL Listed, UL924, C-UL, CE, RoHS
Housing Rating:	UL Accepted for Use in Plenum, NEMA 1
Gold Flash:	No
Override Test Switch:	Yes



Features

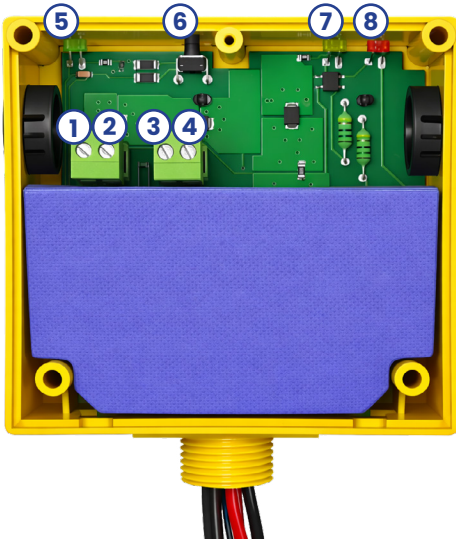
- » Automatically switches to emergency power upon loss of normal power.
- » Includes a 0-10V dimmer override feature.
- » Equipped with local and remote test button options for verifying functionality.
- » Provides LED indicators for Normal Power (Green), Emergency Power (Red), and Load Power (Yellow).
- » Suitable for bypassing wall switches and lighting control panel circuits.

Electrical

Real Power Draw:	2.27 W Max
Reactive Power Draw:	24.38 VAR Max
Normal Coil Current:	24 mA Max
Emergency Coil Current:	118 mA Max
Normal Coil Voltage:	120 VAC to 277 VAC (50/60 Hz)
Emergency Coil Voltage:	120 VAC to 277 VAC (50/60 Hz)
Magnetic Ballast Rating:	20 A @ 277 VAC
Electronic Ballast Rating:	16 A @ 277 VAC
Tungsten Rating:	10 A @ 120 VAC



Terminal Identification

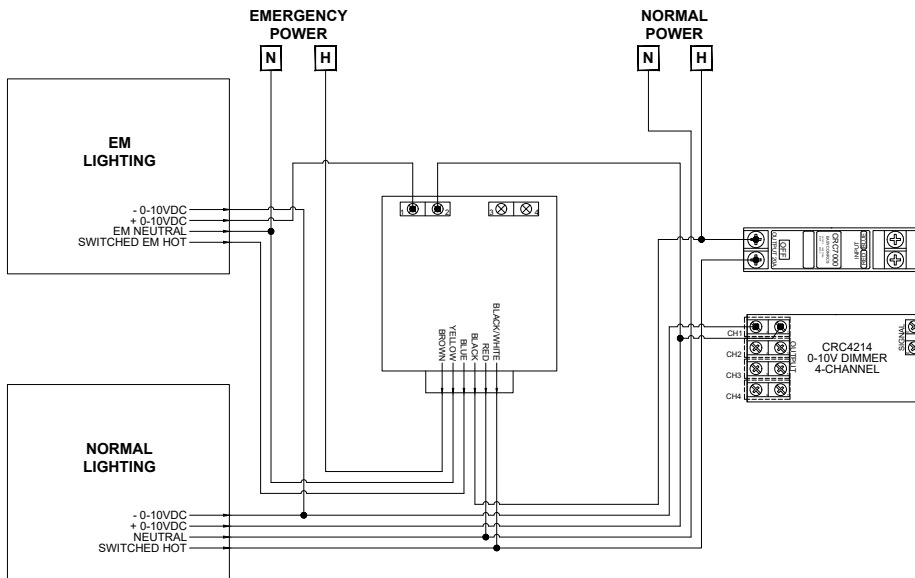


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|----|---------------------|----------------|----------------------|
| 1. | 0-10V (+) | | |
| 2. | 0-10V (+) | | |
| 3. | Remote Test Input | BRN | Emergency Line |
| 4. | Remote Test Input | YEL | Emergency Neutral |
| 5. | Normal Power LED | BLU | Emergency Load |
| 6. | Local Test Button | BLK/WHT | Normal Switched Line |
| 7. | Load Power LED | BLK | Normal Line |
| 8. | Emergency Power LED | RED | Normal Neutral |

0 – 10 V Dimming Disable: Terminals 1 and 2 are used for disabling the 0 – 10 V dimming function. By creating an open circuit between these terminals, the system can be configured to ensure that the lights operate at full output during emergencies.

Remote Test Input Overview: Terminals 3 and 4 are designated for the Remote Test Input. Connecting a momentary switch to these terminals allows for testing the emergency operation of the lighting system, ensuring proper response during an emergency state.

Wiring Diagrams



UL924 WIRING DETAIL (ESRN)



Installation Verification

Wiring:

Apply Emergency Power to the Emergency Power Input and Normal Power to the Normal Power Input. (If using the Wall Switch Input, apply Normal Power to the switch also, but keep the switch OFF/OPEN.)

- a. The red LED (Emergency Power Available) should be on.
- b. The green LED (Normal Power Available) should be on.
- c. The yellow LED (Load Status) should be off.
- d. The load should be off.
- e. The feedback/dimmer contact should be closed.

Local Test Button:

1. Turn switched circuit off. The emergency fixtures should turn off.
2. Press and hold Local Test Button.
3. Emergency fixtures should turn on.
4. Release Test Button.
5. Emergency fixtures should turn off.

Wall Switch:

1. Turn switched circuit on.
2. Emergency fixtures should turn on.
3. Turn switched circuit off.
4. Emergency fixtures should remain on for two (2) seconds before turning off.

Troubleshooting

Condition	Action
Red LED is OFF	Check Emergency Power Input wiring (BROWN and YELLOW wires) and voltage.
Green LED is OFF	Check Normal Power Input wiring (BLACK and RED wires) and voltage.
Yellow LED is ON but Load is OFF	Check Load wiring (BLUE wire and Load Neutral). Verify Load operation voltage is the same as the Emergency Power Input Voltage. Check bulbs and ballast. Replace Unit.
Load is ON but Yellow LED is OFF	Replace Unit.
Yellow LED and Load do not turn on when being tested	Check bulbs and ballast. Check wiring connections if using a remote test option. Press local test button on the unit. Replace Unit.
Yellow LED and Load will not turn OFF	Verify status of Normal Power Input. Open Wall Switch Input Verify no test inputs are stuck closed. (i.e. Remote Test Input)

